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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/816,909	03/23/2001	Yoh-Han Pao	0655/63835	7514

7590 11/12/2003

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EXAMINER
STARKS, WILBERT L

ART UNIT	PAPER NUMBER
2121	10

DATE MAILED: 11/12/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/816,909	PAO ET AL.	
	Examiner	Art Unit	
	Wilbert L. Starks, Jr.	2121	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 30-49 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 30-49 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 9 .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 30-49 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-29 of U.S. Patent No.

6,134,537. Although the conflicting claims are not identical, they are not patentably distinct from each other because:

Claim 30

Claim 30 is taught by claim 1 of U.S. Patent No. 6,134,537. Claim 30's neural network is taught by the neural network of claim 1 of the prior art; claim 30's training module is taught by the training module of claim 1 of the prior art.

Claim 31

Claim 31 is taught by claim 1 of U.S. Patent No. 6,134,537. Claim 31's constraint of values of a covariance matrix is taught by the equalizer and orthogonalizer of claim 1 of the cited prior art.

Claim 32

Claim 32 is taught by claim 1 of U.S. Patent No. 6,134,537. Claim 32's diagonalization of the matrix is taught by the diagonalization of claim 1 of the cited prior art.

Claim 33

Claim 33 is taught by claim 1 of U.S. Patent No. 6,134,537. Claim 33's two dimensional map is taught by the output signals of claim 1 and Figure 15 of the cited prior art

Claim 34

Claim 34 is taught by claim 1 of U.S. Patent No. 6,134,537. Claim 34's two dimensional map is taught by the output signals of claim 1 and Figure 15 of the cited prior art

Claim 35

Claim 35 is taught by claim 1 of U.S. Patent No. 6,134,537. Claim 35's three dimensional map is taught by the output signals of claim 1 and Figure 2 of the cited prior art.

Claim 36

Claim 36 is taught by claim 1 of U.S. Patent No. 6,134,537. Claim 36's "self-supervised training" is taught by the training method of claim 1 of the cited prior art.

Claim 37

Claim 37 is taught by claim 1 of U.S. Patent No. 6,134,537. Claim 37's "self-organizing" is taught by the training methods of claim 1 and Figures 16A-16D of the cited prior art.

Claim 38

Claim 38 is taught by claim 1 of U.S. Patent No. 6,134,537. Claim 38's nonlinear nodes are taught by the nodes of claim 1 of the cited prior art.

Claim 39

Claim 39 is taught by claim 1 of U.S. Patent No. 6,134,537. Claim 39's output layer is taught by the output layer of claim 1 of the cited prior art.

Claim 40

Claim 40 is taught by claim 1 of U.S. Patent No. 6,134,537. Claim 40's neural network is taught by the neural network of claim 1 of the cited prior art; claim 40's training module is taught by the training module of claim 1 of the cited prior art.

Claim 41

Claim 41 is taught by claim 1 of U.S. Patent No. 6,134,537. Claim 41's constraint of values of a covariance matrix is taught by the equalizer and orthogonalizer of claim 1 of the cited prior art.

Claim 42

Claim 32 is taught by claim 1 of U.S. Patent No. 6,134,537. Claim 32's diagonalization of the matrix is taught by the diagonalization of claim 1 of the cited prior art.

Claim 43

Claim 43 is taught by claim 1 of U.S. Patent No. 6,134,537. Claim 43's two dimensional map is taught by the output signals of claim 1 and Figure 15 of the cited prior art

Claim 44

Claim 44 is taught by claim 1 of U.S. Patent No. 6,134,537. Claim 44's two dimensional map is taught by the output signals of claim 1 and Figure 15 of the cited prior art

Claim 45

Claim 45 is taught by claim 1 of U.S. Patent No. 6,134,537. Claim 45's three dimensional map is taught by the output signals of claim 1 and Figure 2 of the cited prior art.

Claim 46

Claim 46 is taught by claim 1 of U.S. Patent No. 6,134,537. Claim 46's "self-supervised training" is taught by the training method of claim 1 of the cited prior art.

Claim 47

Claim 47 is taught by claim 1 of U.S. Patent No. 6,134,537. Claim 47's "processor" and "program storage device" are taught by claim 1 of the cited prior art.

Claim 1 is a means plus function claim which incorporates the limitations of the Specification. One of those limitations is the following:

> Still another advantage of the present invention is the provision of a neural network for organization of pattern data efficiently so as to allow for real-time computation with conventional processing hardware.

Claim 48

Claim 48 is taught by claim 1 of U.S. Patent No. 6,134,537. Claim 48's "program storage device" is taught by claim 1 of the cited prior art. Claim 1 is a means plus function claim which incorporates the limitations of the Specification. One of those limitations is the following:

> Still another advantage of the present invention is the provision of a neural network for organization of pattern data efficiently so as to allow for real-time computation with conventional processing hardware.

Claim 49

Claim 49 is taught by claim 1 of U.S. Patent No. 6,134,537. Claim 49's "computer data signal" is taught by claim 1 of the cited prior art. Claim 1 is a means plus function claim which incorporates the limitations of the Specification. One of those limitations is the following:

> Still another advantage of the present invention is the provision of a neural network for organization of pattern data efficiently so as to allow for real-time computation with conventional processing hardware.

Conclusion

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Wilbert L. Starks, Jr. whose telephone number is (703) 305-0027.

Alternatively, inquiries may be directed to the following:

S. P. E. Anil Khatri	**(703) 305-0282**
After-final (FAX)	**(703) 746-7238**
Official (FAX)	**(703) 746-7239**
Non-Official/Draft (FAX)	**(703) 746-7240**

WLS

07 November 2003

Wilbert L. Starks, Jr.
Primary Examiner
Art Unit - 2121